CLAIMS

1. A process for preparing a pigmentary composition comprising particles (p) with a chromium oxide base, in which the chromium present as chromium (VI) represents at most 5 ppm of the total mass of the particles (p), said process comprising a stage (E) consisting of bringing into contact:

(a) hydrated chromium oxide-based particles (p_0), with a chromium (VI) content between 20 and 1000 ppm of the total mass of said particles (p_0); and

(b) an iron (II) compound.

2. A process as in claim 1, in which the particles (p_0) used in the process have an average size between 1 and 20 microns.

3. A process as in claims 1 or 2, in which the molar ratio of the iron (II) used to the chromium (VI) initially found in the particles (p_0) is between 4 : 1 and 6 : 1.

4. A process as in one of claims 1 to 3, in which the iron (II) compound is iron (II) sulfate.

5. A process as in one of claims 1 to 4, in which the reaction of the iron (II) compound used has a pH between 5 and 9.

6. A Process as in any of the preceding claims for the preparation of a pigmentary composition intended for use in a cosmetic formulation.